

anterior  $\frac{1}{3}$  of ventral. Caudal slightly and obliquely emarginate. Caudal peduncle  $2\frac{2}{3}$  as long as deep. Traces of dark spots on the upper surface of the head. Dorsal fin with the posterior part of each interradiial membrane dusky.

One specimen 240 mm. in total length, from the Rio Piracicaba, São Paulo, Brazil.

This species is closely allied to *P. Garmani*, Regan. I have named it after my father, Dr. H. von Ihering.

---

LXXVI.—*Description of a new Snake from Venezuela.*

By G. A. BOULENGER, F.R.S.

*Leptognathus latifrontalis.*

Body strongly compressed. Eye large, its diameter once and a half its distance from the oral border. Rostral a little broader than deep, just visible from above; internasals two thirds the length of the præfrontals; frontal slightly broader than long, as long as its distance from the end of the snout, shorter than the parietals; nasal divided, the posterior part fused with the loreal, which enters the eye; a single præocular; two postoculars; temporals 2+3 or 2+4; eight or ten upper labials, third, fourth, and fifth, or fourth, fifth, and sixth entering the eye; first lower labial in contact with its fellow behind the symphysial; three pairs of chin-shields, anterior as long as broad. Scales in 15 rows, vertebrales enlarged and a little broader than long. Ventrals 19 $\frac{1}{2}$ ; anal entire; subcaudals 95. Reddish brown above, with darker cross-bands broader than the spaces between them; lower parts pale brown, speckled with whitish.

Total length 800 mm.; tail 220.

A single female specimen collected at Aricaqua, 1000 m. altitude, by Sr. Briceño.

---

LXXVII.—*A new Cavernularid from Ceylon.*

By JAMES J. SIMPSON, M.A., University of Aberdeen.

[Plate XVII.]

THE collection of Aleyonarians made by Professor W. A. Herdman, D.Sc., F.R.S., in Ceylon Seas (1902) included a small specimen of much interest which was overlooked in the report by Prof. J. Arthur Thomson and Mr. W. D. Henderson

(Ceylon Reports, Royal Society London, vol. iii. 1905). The specimen dredged off Ceylon is a Cavernularid with very distinctive characters and apparently quite new to science. I am indebted to Professors Herdman and Thomson for the opportunity of studying this interesting type.

The colony shows no trace of attachment, and consists of a polyp-bearing upper portion, somewhat ovoid in shape or like a compressed cylinder with hemispherical ends, separated by a constriction from a short, compressed, relatively slender, sterile stalk or trunk, the whole presenting the appearance of a thick club with a short handle (see Pl. XVII. fig. 1). A section of the stock, whether transverse or longitudinal, has the form of a broadly terminated ellipse.

The external measurements are the following:—

- (1) Total length 3·7, breadth 1·7, thickness 1 cm.
- (2) Stock: length 2·5, breadth 1·7, thickness 1 cm.
- (3) Trunk: length 1·2, breadth 0·6, thickness 0·45 cm.
- (4) Constriction 0·65 cm. in breadth.

The general colour of the colony is a dark brown approaching a chocolate-colour, but when seen through a lens it seems decidedly lighter. Some parts of the trunk appear quite whitish; this is due to the spicules shining through the slightly differentiated cortical layer. Over the whole surface of the stock there are pit-like depressions into which the polyps have been retracted. Under a low-power microscope the surface presents a peculiar warty appearance, due to small hemispherical structures (groups of spicules) which are lighter in colour than the general background.

The polyps are dimorphic, the smaller siphonozooids being scattered irregularly among the larger autozooids, which are separated by distances varying from 1 to 3 mm. The autozooids are all retracted except in one small depression. The walls of the polyp-cavities seem to contract over the retracted autozooids, the cavities measuring about 0·5 mm. across, those of the siphonozooids 0·15 to 0·2 mm. The fully expanded autozooid is about 0·75 to 1 mm. in length, and the tentacles measure 0·7 mm. (see fig. 2).

The coenenchyma is densely spiculate, the spicules varying greatly in form and size in the different parts. There are three distinct central canals in the stock which pass down to the very tip of the trunk (fig. 3). The spicules are arranged in bundles supporting the polyp-cavities. The larger polyps contain numerous ova measuring 0·01 to 0·025 mm. in diameter.

A summary description of the spicules is almost impossible because of the number of different forms presented in even a

small portion. They vary to a considerable extent in the different parts of the colony, but a few characteristic points may be noted as common to all. In certain respects they resemble sponge-spicules more than the typical Aleyonarian forms, especially in the fact that they are hyaline and smooth. Many, however, bear digitiform processes, though they could in no way be termed echinulate or warty. In many cases the terminal processes do not end bluntly, but present the appearance of attached cylinders. In the bifurcated forms they closely resemble a double-barrelled gun. Another noteworthy point is the characteristic annulated structure most prominent on the cylindrical forms or those with cylindrical terminations.

A detailed examination of the spicules reveals remarkable peculiarities; those of the cortical layer of the stock are arranged in small groups, which give the colony the warty appearance already referred to. They include the following types:—

- (a) Blunt spindles,  $0.3 \times 0.05$  to  $0.15 \times 0.05$  mm.
- (b) Sinuous cylinders,  $0.3 \times 0.025$  mm.
- (c) Pyriform and elongated forms,  $0.5 \times 0.075$  mm.
- (d) Double vases,  $0.3 \times 0.1$  mm.
- (e) Club-shaped, with digitiform terminal processes,  $0.3 \times 0.05$  mm.
- (f) Others approaching a palmate form,  $0.25 \times 0.075$  mm. (fig. 4).

Those supporting the body-parenchyma of the stock include the following types:—

- (a) Cylinders with processes at both ends,  $0.5 \times 0.075$ ,  $0.7 \times 0.05$  mm.
- (b) Sinuous, with digitiform terminations,  $0.5 \times 0.1$ ,  $0.6 \times 0.075$  mm.
- (c) Club-shaped, with digitiform processes,  $0.55 \times 0.05$  mm.
- (d) Double barrels,  $0.5 \times 0.05$ ,  $0.7 \times 0.05$  mm.
- (e) Forms like a long bone bereft of epiphyses,  $0.4 \times 0.02$ ,  $0.5 \times 0.02$ ,  $0.5 \times 0.025$  mm.
- (f) Irregular and sinuous forms,  $0.45 \times 0.05$  mm. (fig. 5).

Those of the trunk, which are on the whole larger than those in the stock cœnenchyma, include:—

- (a) Spindles,  $0.8 \times 0.1$ ,  $0.5 \times 0.05$  mm.
- (b) Palmate forms,  $0.6 \times 0.1$ ,  $0.45 \times 0.05$  mm.
- (c) Clubs,  $0.55 \times 0.01$  mm.
- (d) Cylindrical forms,  $0.45 \times 0.025$  mm. (fig. 6).

An attempt to cut sections proved a failure, and it was thought undesirable to sacrifice much of the single specimen, which had already been cut into four pieces.

There seems no room for doubt that this remarkable form is related to "*Cavernularia*," e. g., in general club-like shape, distinction between stock and trunk, dimorphism of zooids, and in the absence of spicules from the polyp-tentacles. A tabular contrast between Kölliker's description of the genus and the characters of Herdman's specimen will show the distinctiveness of the latter:—

- |   |  |
|---|--|
| (a) Polyps 3-7 mm. in length.                           | (a) Not exceeding 1 mm.  |
| (b) Axis small or absent.                               | (b) Axis absent.   |
| (c) Spicules long and slender, also slightly flattened. | (c) Besides the long and slender forms, which show no trace of flattening, there are very numerous short broad forms of very diverse shapes. |
| (d) Stock and trunk cylindrical.                        | (d) Rather elliptical.   |
| (e) Stock and trunk continuous.                         | (e) Separated by a constriction.   |
| (f) Four canals in trunk and stock well developed.      | (f) Three canals in the stock, which become less distinct, almost appearing as two in the trunk.   |
|   | (g) Zooids not so numerous as in Kölliker's description.   |

Thus Herdman's specimen differs from *Cavernularia* in the length of the autozooids, in the frequency of the siphonozooids, in the shape and character of the stock and trunk, in the number of longitudinal canals, and in the details of spiculation. Although *Cavernularia obesa* is a variable form, none of the varieties present any close resemblance to our specimen. It also differs from *C. madeirensis* (Studer) both in the size and frequency of the zooids. The genera *Stylobelemnou* (Kölliker) and *Stylobelemnoides* (Thomson and Henderson) need not be considered.

• It seems necessary, therefore, to establish a new genus in the subfamily Cavernularidæ, and it is interesting to note that the Ceylon collection included another new genus (*Stylobelemnoides*) also in the same subfamily. I propose to name the new form

*Fusticularia Herdmani*, gen. et sp. n. (Pl. XVII.)

A somewhat sponge-like Cavernularid with a flattened ovoid stock separated by a constriction from a comparatively slender sterile trunk; with dimorphic retractile polyps, the autozooids not exceeding 1 mm. in length, the much smaller siphonozooids scattered irregularly among the autozooids; with abundant densely spiculate cœnenchyma, traversed by three longitudinal central canals passing down into the

trunk: with smooth hyaline spicules bearing peculiar digitiform terminal processes and showing very characteristic annulations, especially near the ends.

*Locality.* Cheval Paar, S.E. of Ceylon, 6 fathoms.

## EXPLANATION OF PLATE XVII.

*Fig. 1.* *Fusticularia Herdmani*, whole colony, natural size.

*Fig. 2.* Portion enlarged, showing the different stages of retraction of the autozooids.

*Fig. 3.* Transverse section of the stock, showing three central canals.

*Fig. 4.* Spicules of the cortical layer or cuticle.

*Fig. 5.* Spicules of the body-parenchyma.

*Fig. 6.* Spicules of the trunk.

LXXVIII.—*Natural History Notes from the R.I.M.S. Ship 'Investigator,' Capt. T. H. Heming, R.N., commanding.*—Series III., No. 9. *On a new Species of the Dorippoid Genus Cymonomus from the Andaman Sea, considered with reference to the Distribution of the Dorippidæ; with some Remarks on the allied Genus Cymonomops.* BY A. ALCOCK, M.B., LL.D., F.R.S., Superintendent of the Indian Museum and Professor of Zoology in the Medical College of Bengal.

[Plate XVIII.]

## CONTENTS.

1. *Cymonomus* and the *Dorippidæ*.
2. *Cymonomus* characterized, and *C. andamanicus* distinguished and differentiated.
3. Geographical Distribution of *Cymonomus* and other *Dorippoid* Genera.
4. Remarks on the Genus *Cymonomops*.
5. List of the *Dorippidæ*.

1. *CYMONOMUS* AND THE *DORIPPIDÆ*.

The small blind deep-sea crabs of the genus *Cymonomus* have, in the 'Quarterly Journal of Microscopical Science' for December 1903, formed the subject of a paper, by Professor Ray Lankester, of much interest both biological and taxonomic; so that the discovery of a representative of the genus in the Andaman Sea may, perhaps, be thought worthy of independent notice, especially as it invites zoogeographical inquiries that seem to deserve consideration.

*Cymonomus* belongs to the Oxystome family *Dorippidæ*—a primitive family, in the typical members of which, as in